WHAT IS CLAIMED IS:

1. An organic electroluminescent light emitting device, comprising:
a first electrode;
a second electrode;
at least one organic light emitting layer; and
an output coupler which reduces a Fresnel loss.

2. The device of claim 1, wherein:
the device comprises an organic light emitting diode;
the output coupler further reduces a critical angle loss in addition to the Fresnel loss; and
an index of refraction of the output coupler is matched to an index of refraction of an adjacent layer of the electroluminescent device.

3. The device of claim 2, wherein the index of refraction of the output coupler is the same as or close to the index of refraction of the adjacent layer of the electroluminescent device.

4. The device of claim 3, wherein the index of refraction of the output coupler is the same as the index of refraction of the adjacent layer of the electroluminescent device.

5. The device of claim 2, further comprising a transparent substrate between the output coupler and the at least one organic light emitting layer, wherein the index of refraction of the output coupler is matched to an index of refraction of the substrate.

6. The device of claim 5, wherein the index of refraction of the output coupler is the same as or close to the index of refraction of the substrate.

7. The device of claim 6, wherein the index of refraction of the output coupler is the same as the index of refraction of the substrate.

8. The device of claim 2, wherein the output coupler comprises a matrix material containing light scattering particles.

9. The device of claim 8, wherein:
the matrix material comprises a glass or polymer material; and
the light scattering particles comprise 0.1 to 20 micron light scattering particles.

10. The device of claim 8, wherein the matrix material comprises silicone or epoxy containing:
titania or zinc oxide light scattering particles; and
nanoparticles having a size of less than 100 nm which adjust an index of refraction of the matrix material such that it is equal or close to the index refraction of the substrate.

11. The device of claim 2, wherein the output coupler comprises a shaped transparent material attached to the organic light emitting diode.

12. The device of claim 11, wherein the shaped transparent material comprises glass or polymer material having a corrugated or dimpled light emitting surface attached to a transparent substrate of the organic light emitting diode.

13. The device of claim 12, wherein each dimple has a height greater than 0.1 microns and a spacing between dimple peaks is a factor of 10 or less of the dimple height.

14. The device of claim 13, wherein the shaped transparent material comprises nanoparticles having a size of less than 100 nm which adjust an index of refraction of

the shaped transparent material such that it is equal or close to the index refraction of the substrate.

15. The device of claim 2, wherein the output coupler comprises a transparent substrate having corrugated or dimpled light emitting surface.

16. The device of claim 15, wherein each dimple has a height of greater than 0.1 microns and a spacing between dimple peaks is a factor 10 or less of the dimple height.

17. The device of claim 16, wherein the substrate comprises a glass or a polymer substrate containing nanoparticles having a size of less than 100 nm which adjust an index of refraction of the substrate such that it is equal or close to the index refraction of the device.

18. The device of claim 1, wherein:

the electroluminescent device emits white light;

the first electrode comprises a metal containing electrode;

the organic light emitting layer comprises at least one an organic molecule layer or at least one polymer layer over a first side of the first electrode;

the second electrode comprises a transparent electrode having a first side over the organic light emitting layer; and

further comprising:

a voltage source; and

a luminescent material.

19. The device of claim 18, wherein the luminescent material comprises a phosphor layer between the a device substrate and the output coupler.

20. The device of claim 18, wherein the luminescent material comprises a phosphor incorporated into the output coupler.

21. The device of claim 18, further comprising:

a first device electrical contact contacting the first side of the first electrode;

a second device electrical contact contacting a second side of the second electrode;

a sealing member over the second side of the second electrode;

a mounting substrate over the sealing member; and

a plurality of organic electroluminescent devices below the mounting substrate having a fill factor of greater than 0.3.

22. The device of claim 1, wherein:

a reflectivity of a non-light emitting side of the device is 80% or higher;

the output coupler optical thickness for scattering is about 0.1 to about 0.9; and

the device emission extraction is 55% or higher.

23. The device of claim 22, wherein:

a reflectivity of the first electrode is 86% or higher;

the output coupler optical thickness for scattering is about 0.5; and

the device emission extraction is 58% or higher.

24. The device of claim 1, wherein the output coupler comprises:

a first layer having a first index of refraction that is matched to an index of refraction of an adjacent layer of the electroluminescent device; and

a second layer having a second index of refraction lower than the first index of refraction.

25. The device of claim 1, wherein the output coupler comprises a layer having a graded index of refraction, wherein an inner portion of the layer has a first index of refraction that is matched to an index of refraction of an adjacent layer of the electroluminescent device and an outer portion of the layer has a second index of refraction that is lower than the first index of refraction.

26. An organic electroluminescent light emitting device, comprising:

a first electrode;

at least one organic light emitting layer over the first electrode;

a second transparent electrode over the at least one organic light emitting layer; and

a shaped transparent material which has corrugated or dimpled light emitting surface and which contains nanoparticles having a size of less than 100 nm over the second transparent electrode.

27. The device of claim 26, wherein:

the organic electroluminescent light emitting device comprises an organic light emitting diode;

the first electrode comprises a metal containing electrode;

the organic light emitting layer comprises at least one an organic molecule layer or at least one polymer layer;

the second electrode comprises an indium tin oxide electrode;

the shaped transparent material comprises a glass or a polymer material containing 0.1 to 20 micron light scattering particles; and

each dimple has a height of greater than 0.1 microns and a spacing between dimple peaks is a factor 10 or less of the dimple height.

28. The device of claim 26, wherein shaped transparent material comprises a glass or polymer material formed on a glass or polymer substrate.

29. The device of claim 26, wherein shaped transparent material comprises a glass or polymer material substrate onto which the organic electroluminescent light emitting device is fabricated.

30. An organic electroluminescent light emitting device, comprising:

a first electrode;

at least one organic light emitting layer over the first electrode;

a second transparent electrode over the at least one organic light emitting layer; and

a matrix material containing light scattering particles over the second electrode.

31. The device of claim 30, wherein:

the matrix material comprises silicone or epoxy formed over a glass or polymer substrate; and

the light scattering particles comprise 0.1 to 20 micron titania or zinc oxide light scattering particles.

32. The device of claim 31, wherein the matrix material further comprises nanoparticles having a size of less than 100 nm.

33. A method of making an organic electroluminescent light emitting device, comprising:

placing a first material into a mold cavity;

solidifying the first material to form a shaped transparent material having corrugated or dimpled first light emitting surface; and

attaching the shaped transparent material to the an organic electroluminescent light emitting device.

34. The method of claim 33, wherein the step of attaching comprises:

forming a first transparent electrode over a second surface of the shaped transparent material;

forming at least one organic light emitting layer over the first electrode; and

forming a second electrode over the at least one organic light emitting layer.

35. The method of claim 33, wherein the step of attaching comprises attaching a transparent substrate of the organic electroluminescent light emitting device further

containing a first electrode, at least one organic light emitting layer and a transparent second electrode to the shaped transparent material.

36. The method of claim 35, further comprising:

forming a glass plate over the first electrode;

forming a metal coating over the glass plate; and

attaching the organic electroluminescent light emitting device to a mounting substrate.

37. The method of claim 36, further comprising attaching a plurality of organic electroluminescent light emitting devices to the mounting substrate such that the devices have a fill factor of greater than 0.3

38. The method of claim 33, wherein the first material comprises thermoplastic, thermoset or elastomeric material containing nanoparticles having a size of less than 100 nm.

39. The method of claim 38, wherein the each dimple on the first light emitting surface has a height of greater than 0.1 microns and a spacing between dimple peaks is a factor of 10 or less of the dimple height.

40. An organic electroluminescent light emitting device, comprising:

a first electrode;

at least one organic light emitting layer over the first electrode;

a second transparent electrode over the at least one organic light emitting layer; and

a shaped transparent material whose index of refraction is selected to match that of an adjacent layer of the light emitting device.

41. The device of claim 40, wherein the shaped transparent material contains

nanoparticles having a size of less than 100 nm and a corrugated or dimpled light emitting surface.

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